

CATALOG DOCUMENTATION

National Surface Water Survey: Eastern Lake Survey-Phase II
SUSFIM01 - Summer Chemistry Survey

TABLE OF CONTENTS

1. DATA SET IDENTIFICATION
2. INVESTIGATOR INFORMATION
3. DATA SET ABSTRACT
4. OBJECTIVES AND INTRODUCTION
5. DATA ACQUISITION AND PROCESSING METHODS
6. DATA MANIPULATIONS
7. DATA DESCRIPTION
8. GEOGRAPHIC AND SPATIAL INFORMATION
9. QUALITY CONTROL / QUALITY ASSURANCE
10. DATA ACCESS
11. REFERENCES
12. TABLE OF ACRONYMS
13. PERSONNEL INFORMATION

1. DATA SET IDENTIFICATION

1.1 Title of Catalog Document
SUSFIM1M

1.2 Authors of the Catalog Entry
U.S. EPA NHEERL Western Ecology Division
Corvallis, OR

1.3 Catalog Revision Date
May 1998

1.4 Data Set Name
susfim01

1.5 Task Group
National Acid Precipitation Assessment Program(NAPAP)- Aquatic Effects
Research Program

1.6 Data Set Identification Code
155

1.7 Version
001

1.8 Requested Acknowledgment

This research was funded as apart of the National Acid Precipitation Assessment Program (NAPAP) by the U.S. Environmental Protection Agency (EPA). If you publish these data or use them for analyses in publications, EPA requires a standard statement for work it has supported:

"Although the data described in this article have been funded wholly or in part by the U.S. Environmental Protection Agency, it has not been subjected to Agency review, and therefore does not necessarily reflect the views of the Agency and no official endorsement of the conclusions should be inferred."

2. INVESTIGATOR INFORMATION

2.1 Principal Investigator
Dixon Landers
U.S. Environmental Protection Agency
NHEERL Western Ecology Division
200 S.W. 35th Street
Corvallis, OR 97333

2.2 Investigation Participant - Sample Collection

John Baker, Coordinator

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set

The Eastern Lake Survey-Phase II (ELS-II), conducted in the spring, summer and fall of 1986. The focus of ELS-II was on the northeastern United States. ELS-II involved the resampling of a subset of lakes in the northeastern United States sampled in ELS-I to determine chemical variability and biological status. Furthermore, within-index period variability was examined in the fall of 1986 to provide insight concerning the ability to detect chemical changes over time, and the precision of the estimates of the number of acidic lakes from Phase I.

3.2 Keywords for the Data Set

Aluminum, alkalinity, acid neutralizing capacity, calcium, dissolved inorganic carbon, dissolved organic carbon, chloride, color, specific conductance, iron, potassium, magnesium, manganese, ammonium, sodium, sulfate, nitrate, pH, total phosphorus, silica, turbidity, water chemistry,

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The primary objectives of ELS-II were (1) to assess the sampling error associated with the ELS-I fall index sample, (2) to estimate the number of lakes with low acid neutralizing capacity (ANC) (i.e. potentially susceptible) that are not acidic in the fall but that are acidic in other seasons, and (3) to establish seasonal water chemistry characteristics among lakes.

4.2 Data Set Objective

This data set is part of the National Surface Water Survey (NSWS) and the National Acid Precipitation Assessment Program (NAPAP). The data set contributes to the quantification of the extent, location, and characteristics of sensitive and acidic lakes and streams in the eastern United States sampled during the summer season.

4.3 Data Set Background Discussion

Efforts to assess the impact of acid deposition on aquatic resources have previously been limited to single-factor indices. Acidification of surface waters, however, depends on the acid neutralizing capacity (ANC) generated both within the lake and its watershed. Hence, the response of an aquatic ecosystem to acidic deposition is a composite of many factors. Water chemistry in lakes is analyzed to understand the chemical habitat within which biota must exist so that we can understand the biological potential of the system.

4.4 Summary of Data Set Parameters

Water chemistry parameters are reported for one sample taken at the deepest part of the lake. These include: aluminum, alkalinity, acid neutralizing capacity, calcium, carbonate, color, specific conductance, dissolved inorganic carbon, dissolved organic carbon, bicarbonate, potassium, magnesium, ammonium, sodium, nitrate, total nitrogen, pH, total phosphorus, silica, total suspended solids, and turbidity. In addition to chemical characteristics of lakes, data were collected on lake characteristics-e.g. location, elevation, depth, area, etc.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective

To obtain a single grab sample of lake water for the purposes of chemical analysis during the summer season, just after lake turnover, from the center and deepest part of the lake.

5.1.2 Sample Collection Methods Summary

A 6.2-L Van Dorn acrylic plastic sample bottle was filled from a depth of 1.5 m. Two 60-ml syringes and one 4-L polyethylene Cubitainer were filled from the Van Dorn bottle.

5.1.3 Sampling Start Date

July 23, 1986

5.1.4 Sampling End Date

August 11, 1986

5.1.5 Platform

Helicopter/boat

5.1.6 Sampling Gear

Merritt, G.D., and V.A. Sheppe. 1988. Eastern Lake Survey- Phase II, Field Operations Report. EPA/600/4-89/029. U.S. Environmental Protection Agency, Las Vegas, Nevada.

5.1.7 Manufacturer of Instruments

NA

5.1.8 Key Variables

NA

5.1.9 Sampling Method Calibration

NA

5.1.10 Sample Collection Quality Control

Mitchell-Hall, T.E., A.C. Neale, S.G. Paulsen, and J.E. Pollard. 1989. Eastern Lake Survey- Phase II: Quality Assurance Report. EPA/600/4-85-017. U.S. Environmental Protection Agency, Las Vegas, Nevada.

5.1.11 Sample Collection Method Reference

5.1.12 Sample Collection Method Deviations

NA

5.2 Data Preparation and Sample Processing

5.2.1 Sample Processing Objective

5.2.2 Sample Processing Methods Summary

5.2.3 Sample Processing Method Calibration

5.2.4 Sample Processing Quality Control

5.2.5 Sample Processing Method Reference

6. DATA MANIPULATIONS

6.1 Name of New or Modified Values

None.

6.2 Data Manipulation Description

7. DATA DESCRIPTION

7.1 Description of Parameters

#	Parameter SAS Name	Data Type	Len	Format	Parameter Label

9	ACCES1D	Char	3		ACCESS FORM 1D
128	ACC011	Num	8 F		CO2-ACIDITY (UEQ/L) FORM 11
109	ALD02	Num	8 F		PCV ALUMINUM DISSOLVED (UG/L) FORM 2
153	ALDI98	Num	8		LABILE MONOMERIC AL (UG/L)
117	ALEX11	Num	8 F		ALUMINUM-EXTRACTABLE (UG/L) FORM 11
129	ALKA11	Num	8 F		ALKALINITY (UEQ/L) FORM 11
110	ALO_02	Num	8 F		PCV ALUMINUM ORGANIC (UG/L) FORM 2
134	ALT11	Num	8 F		TOTAL ALUMINUM (UG/L) FORM 11
137	ANCAT98	Num	8 F		CATIONS/ANIONS RATIO
140	ANDEF98	Num	8 F		CATSUM - ANSUM (UEQ/L)
135	ANSUM98	Num	8 F		SUM OF ANIONS (UEQ/L)
156	BNSTR99	Num	8 F		POPULATION SIZE BY STRATA
49	C0051D	Num	8 F		CONDUCTIVITY AT 0.5 M (US/CM) FORM 1D
53	C0151D	Num	8 F		CONDUCTIVITY AT 1.5 M (US/CM) FORM 1D
57	C0251D	Num	8 F		CONDUCTIVITY AT 2.5 M (US/CM) FORM 1D
59	C0351D	Num	8 F		CONDUCTIVITY AT 3.5 M (US/CM) FORM 1D
61	C0451D	Num	8 F		CONDUCTIVITY AT 4.5 M (US/CM) FORM 1D
63	C0551D	Num	8 F		CONDUCTIVITY AT 5.5 M (US/CM) FORM 1D
65	C0651D	Num	8 F		CONDUCTIVITY AT 6.5 M (US/CM) FORM 1D
67	C0751D	Num	8 F		CONDUCTIVITY AT 7.5 M (US/CM) FORM 1D
69	C0851D	Num	8 F		CONDUCTIVITY AT 8.5 M (US/CM) FORM 1D
71	C0951D	Num	8 F		CONDUCTIVITY AT 9.5 M (US/CM) FORM 1D
73	C1051D	Num	8 F		CONDUCTIVITY AT 10.5 M (US/CM) FORM 1D
75	C1251D	Num	8 F		CONDUCTIVITY AT 12.5 M (US/CM) FORM 1D
77	C1451D	Num	8 F		CONDUCTIVITY AT 14.5 M (US/CM) FORM 1D
79	C1651D	Num	8 F		CONDUCTIVITY AT 16.5 M (US/CM) FORM 1D
81	C1851D	Num	8 F		CONDUCTIVITY AT 18.5 M (US/CM) FORM 1D
83	C2051D	Num	8 F		CONDUCTIVITY AT 20.5 M (US/CM) FORM 1D
85	C2251D	Num	8 F		CONDUCTIVITY AT 22.5 M (US/CM) FORM 1D
87	C2451D	Num	8 F		CONDUCTIVITY AT 24.5 M (US/CM) FORM 1D
89	C2651D	Num	8 F		CONDUCTIVITY AT 26.5 M (US/CM) FORM 1D
91	C2851D	Num	8 F		CONDUCTIVITY AT 28.5 M (US/CM) FORM 1D
93	C3051D	Num	8 F		CONDUCTIVITY AT 30.5 M (US/CM) FORM 1D
95	C3251D	Num	8 F		CONDUCTIVITY AT 32.5 M (US/CM) FORM 1D
97	C3451D	Num	8 F		CONDUCTIVITY AT 34.5 M (US/CM) FORM 1D
99	C3651D	Num	8 F		CONDUCTIVITY AT 36.5 M (US/CM) FORM 1D
101	C3851D	Num	8 F		CONDUCTIVITY AT 38.5 M (US/CM) FORM 1D
111	CA11	Num	8 F		CALCIUM (MG/L) FORM 11
142	CA98	Num	8 F		CALCIUM (UEQ/L)
136	CATSU98	Num	8 F		SUM OF CATIONS (UEQ/L)
44	CHL0D1D	Num	8 F		CHLOROPHYLL VOLUME H2O D (ML) FORM 1D
43	CHL0R1D	Num	8 F		CHLOROPHYLL VOLUME H2O R (ML) FORM 1D
118	CL11	Num	8 F		CHLORIDE ION (MG/L) FORM 11
144	CL98	Num	8 F		CHLORIDE (UEQ/L)
186	CLSTR99	Num	8		PHASE II CLUSTER (1,2 or 3)
157	CNTY99	Char	5		FIPS CODE(ST,COUNTY)
143	C0398	Num	8 F		CARBONATE ALKALINITY (UEQ/L)
107	COLOR02	Num	8 F		COLOR (PCU) FORM 2
46	COMNT1DA	Char	200		FIRST PART COMMENTS FORM 1D
47	COMNT1DB	Char	200		SECOND PART COMMENTS FORM 1D
130	COND11	Num	8 F		CONDUCTIVITY (US/CM) FORM 11
34	CONMH1D	Num	8 F		CONDUCTIVITY AT MID-HYP (US/CM) FORM 1D
24	CONMM1D	Num	8 F		CONDUCTIVITY AT MID-MET (US/CM) FORM 1D
29	CONTH1D	Num	8 F		CONDUCTIVITY AT TOP-HYP (US/CM) FORM 1D
39	CON_B1D	Num	8 F		CONDUCTIVITY AT BTM-1.5M (US/CM) FORM 1D
45	CRWID1D	Char	20		FIELD CREW ID FORM 1D
7	DATSMP	Num	8	DATE	DATE SAMPLED

7.1 Description of Parameters, continued

#	Parameter SAS Name	Data Type	Len	Format	Parameter Label

104	DIC02	Num	8	F	DIC (MG/L) FORM 2
131	DICE11	Num	8	F	DIC-EQUIL (MG/L) FORM 11
132	DICI11	Num	8	F	DIC-INIT (MG/L) FORM 11
158	DISM99	Num	8	F	DISTANCE FROM COAST (MILES)
123	DOC11	Num	8	F	DOC (MG/L) FORM 11
35	DOMH1D	Num	8	F	DISSOLVED OXYGEN AT MID-HYP FORM 1D
25	DOMM1D	Num	8	F	DISSOLVED OXYGEN AT MID-MET FORM 1D
30	DOTH1D	Num	8	F	DISSOLVED OXYGEN AT TOP-HYP FORM 1D
50	DO_051D	Num	8	F	DISSOLVED OXYGEN AT 0.5 M FORM 1D
54	DO_151D	Num	8	F	DISSOLVED OXYGEN (MG/L) 1.5M FORM 1D
40	DO_B1D	Num	8	F	DIS OXYGEN (MG/L) BOTTOM-1.5M FORM 1D
37	DPMH1D	Num	8	F	DEPTH AT MID-HYP (M) FORM 1D
27	DPMM1D	Num	8	F	DEPTH AT MID-MET (M) FORM 1D
17	DPSCB1D	Num	8	F	DEPTH SAMPLE COLL BTM-1.5M (M) FORM 1D
16	DPSCM1D	Num	8	F	DEPTH SAMPLE COLL MID-HYP (M) FORM 1D
18	DPSIT1D	Num	8	F	SITE DEPTH (M) FORM 1D
2	DPSITX1D	Num	8		MAXIMUM LAKE DEPTH (M) - ALSC
32	DPTH1D	Num	8	F	DEPTH AT TOP-HYP (M) FORM 1D
42	DP_B1D	Num	8	F	DEPTH AT BTM-1.5M (M) FORM 1D
194	DRPCDE	Num	8		Drop code for population estimates
159	ELEV99	Num	8	F	LAKE ELEVATION (M)
191	ELEVX99	Num	8		LAKE ELEVATION (M) - ALSC
116	FE11	Num	8	F	IRON (UG/L) FORM 11
122	FTL11	Num	8	F	FLUORIDE (MG/L) FORM 11
150	FTL98	Num	8	F	FLUORIDE (UEQ/L)
152	H98	Num	8	F	HYDROGEN FROM PHAC11 (UEQ/L)
141	HC0398	Num	8	F	HCO3 (UEQ/L)
160	HDEP99	Num	8	F	HYDROGEN ION DEPOSITION (G/M**2/YR)
22	HYDID1D	Char	4		HYDROLAB METER IDENTIFIER CODE FORM 1D
161	HYTYP99	Char	9		HYDROLOGIC TYPE
162	INOUT99	Char	6		PRESENCE/ABSENCE OF INLETS/OUTLETS
113	K11	Num	8	F	POTASSIUM (MG/L) FORM 11
147	K98	Num	8	F	POTASSIUM (UEQ/L)
103	LABNA02	Char	30		LABORATORY FOR ANALYSIS FORM 2
1	LAKE_ID	Char	10		LAKE ID
166	LAT99	Char	10		LATITUDE
167	LATDD99	Num	8	F	LATITUDE (DECIMAL DEGREES)
165	LKID99	Char	7		ERLD-UMD ID/ALSC WSHED-POND ID
155	LKNAM99	Char	30		LAKE NAME
163	LKSIZ99	Num	8	F	LAKE SURFACE AREA (HA)
3	LKSIZX99	Num	8		LAKE SURFACE AREA (HA) - ALSC
164	LKVOL99	Num	8	F	CALC LAKE VOL (10**6 CU M)
4	LKVOLX99	Num	8		DIG. LAKE VOL (10**6 CU M) -ALSC
169	LNGDD99	Num	8	F	LONGITUDE (DECIMAL DEGREES)
168	LONG99	Char	11		LONGITUDE
170	MAPBG99	Char	25		MAP SHEET NAME (1:250,000 SCALE)
171	MAPSM99	Char	40		MAP SHEET NAME, 15 OR 7.5 QUAD
112	MG11	Num	8	F	MAGNESIUM (MG/L) FORM 11
145	MG98	Num	8	F	MAGNESIUM (UEQ/L)
115	MN11	Num	8	F	MANGANESE (UG/L) FORM 11
114	NA11	Num	8	F	SODIUM (MG/L) FORM 11
148	NA98	Num	8	F	SODIUM (UEQ/L)
124	NH411	Num	8	F	AMMONIUM ION (MG/L) FORM 11
151	NH498	Num	8	F	AMMONIUM (UEQ/L)
120	N0311	Num	8	F	NITRATE ION (MG/L) FORM 11
146	N0398	Num	8	F	NITRATE (UEQ/L)
172	N03DP99	Num	8	F	NITRATE DEPOSITION (G/M**2/YR)
139	ORGIO98	Num	8	F	ORGANIC ANION (UEQ/L)
51	PH0051D	Num	8	F	PH AT 0.5 M FORM 1D

7.1 Description of Parameters, continued

#	Parameter SAS Name	Data Type	Len	Format	Parameter Label

55	PH0151D	Num	8	F	PH AT 1.5 M FORM 1D
105	PH02	Num	8	F	STATION PH FORM 2
127	PHAC11	Num	8	F	ACIDITY INITIAL PH FORM 11
126	PHAL11	Num	8	F	ALKALINITY INITIAL PH FORM 11
125	PHEQ11	Num	8	F	AIR-EQUILIBRATED PH FORM 11
36	PHMH1D	Num	8	F	PH AT MID-HYP FORM 1D
26	PHMM1D	Num	8	F	PH AT MID-MET FORM 1D
31	PHTH1D	Num	8	F	PH AT TOP-HYP FORM 1D
41	PH_B1D	Num	8	F	PH AT BTM-1.5M FORM 1D
173	PRCIP99	Num	8	F	PRECIPITATION (M/YR)
14	PREC1D	Char	5		PRECIPITATION FORM 1D
13	PREC01D	Char	7		PRECIPITATION OBS (PREV/CURRENT) FORM 1D
133	PTL11	Num	8	F	TOTAL PHOSPHORUS (UG/L) FORM 11
174	RGSPC99	Char	16		REG SPEC LTM NRC DEW DER SAMPLE CLASS
15	RPREC1D	Char	8		RATE OF PRECIPITATION FORM 1D
175	RT99	Num	8	F	RESIDENCE TIME (YR)
192	RTX99	Num	8		RESIDENCE TIME (YR) - ALSC
176	RUNIN99	Num	8	F	ANNUAL RUNOFF INCHES FROM DIGIT MAP
177	RUNOF99	Num	8	F	SURFACE WATER RUNOFF (M/YR)
193	RUNOFX99	Num	8		SURFACE WATER RUNOFF (M/YR) - ALSC
181	SBRGN99	Char	1		NSWS SUBREGION
20	SECDI1D	Num	8	F	SECCHI DEPTH: DISAPPEAR (M) FORM 1D
19	SECDV1D	Char	1		SECCHI DEPTH Y=VISIBLE TO BOTTOM FORM 1D
154	SECME98	Num	8		MEAN: SECCHI DISK DISAPPEAR ,REAPPEAR (M)
21	SECRE1D	Num	8	F	SECCHI DEPTH: REAPPEAR (M) FORM 1D
121	SI0211	Num	8	F	SILICA (MG/L) FORM 11
102	SITETYP	Char	9		SAMPLING SITE OR TYPE CODE
119	S0411	Num	8	F	SULFATE ION (MG/L) FORM 11
149	S0498	Num	8	F	SULFATE (UEQ/L)
178	S04DP99	Num	8	F	SULFATE DEPOSITION (G/M**2/YR)
138	S0BC98	Num	8	F	SUM OF BASE CATIONS (UEQ/L)
108	SPLCD02	Char	12		SPLIT/SAMPLE CODE TO LAS VEGAS FORM 2
179	ST99	Char	2		STATE (TWO-LETTER ABBREV)
180	STRAT99	Char	3		NSWS STRATA
48	T0051D	Num	8	F	TEMPERATURE AT 0.5 M (DEG C) FORM 1D
52	T0151D	Num	8	F	TEMPERATURE AT 1.5 M (DEG C) FORM 1D
56	T0251D	Num	8	F	TEMPERATURE AT 2.5 M (DEG C) FORM 1D
58	T0351D	Num	8	F	TEMPERATURE AT 3.5 M (DEG C) FORM 1D
60	T0451D	Num	8	F	TEMPERATURE AT 4.5 M (DEG C) FORM 1D
62	T0551D	Num	8	F	TEMPERATURE AT 5.5 M (DEG C) FORM 1D
64	T0651D	Num	8	F	TEMPERATURE AT 6.5 M (DEG C) FORM 1D
66	T0751D	Num	8	F	TEMPERATURE AT 7.5 M (DEG C) FORM 1D
68	T0851D	Num	8	F	TEMPERATURE AT 8.5 M (DEG C) FORM 1D
70	T0951D	Num	8	F	TEMPERATURE AT 9.5 M (DEG C) FORM 1D
72	T1051D	Num	8	F	TEMPERATURE AT 10.5 M (DEG C) FORM 1D
74	T1251D	Num	8	F	TEMPERATURE AT 12.5 M (DEG C) FORM 1D
76	T1451D	Num	8	F	TEMPERATURE AT 14.5 M (DEG C) FORM 1D
78	T1651D	Num	8	F	TEMPERATURE AT 16.5 M (DEG C) FORM 1D
80	T1851D	Num	8	F	TEMPERATURE AT 18.5 M (DEG C) FORM 1D
82	T2051D	Num	8	F	TEMPERATURE AT 20.5 M (DEG C) FORM 1D
84	T2251D	Num	8	F	TEMPERATURE AT 22.5 M (DEG C) FORM 1D
86	T2451D	Num	8	F	TEMPERATURE AT 24.5 M (DEG C) FORM 1D
88	T2651D	Num	8	F	TEMPERATURE AT 26.5 M (DEG C) FORM 1D
90	T2851D	Num	8	F	TEMPERATURE AT 28.5 M (DEG C) FORM 1D
92	T3051D	Num	8	F	TEMPERATURE AT 30.5 M (DEG C) FORM 1D
94	T3251D	Num	8	F	TEMPERATURE AT 32.5 M (DEG C) FORM 1D
96	T3451D	Num	8	F	TEMPERATURE AT 34.5 M (DEG C) FORM 1D
98	T3651D	Num	8	F	TEMPERATURE AT 36.5 M (DEG C) FORM 1D
100	T3851D	Num	8	F	TEMPERATURE AT 38.5 M (DEG C) FORM 1D

7.1 Description of Parameters, continued

#	Parameter SAS Name	Data Type	Len	Format	Parameter Label

8	TIMSM1D	Num	8	TIME	TIME SAMPLED (24 H) HH:MM FORM 1D
10	TMPA1D	Num	8	F	AIR TEMPERATURE (DEG C) FORM 1D
33	TMPMH1D	Num	8	F	TEMPERATURE AT MID-HYP (DEG C) FORM 1D
23	TMPMM1D	Num	8	F	TEMPERATURE AT MID-MET (DEG C) FORM 1D
28	TMP_1D	Num	8	F	TEMPERATURE AT TOP-HYP (DEG C) FORM 1D
38	TMP_B1D	Num	8	F	TEMPERATURE AT BTM-1.5M (DEG C) FORM 1D
106	TUR02	Num	8	F	TURBIDITY (NTU) FORM 2
182	WALA99	Num	8	F	WATERSHED AREA/LAKE AREA
5	WALAX99	Num	8		WATERSHED AREA/LAKE AREA - ALSC
12	WDIR1D	Char	3		ESTIMATED WIND DIRECTION FORM 1D
183	WSDIS99	Char	8		D)WELL I)ND L)OG M)INE R)OAD S)TOCK
185	WSHED99	Num	8	F	WATERSHED AREA (HA)
6	WSHEDX99	Num	8		WATERSHED AREA (HA) - ALSC
184	WSOTH99	Char	25		DISTURB W/I 100M - OTHER
11	WSPD1D	Char	8		ESTIMATED WIND SPEED FORM 1D
188	WT1M99	Num	8		MODIFIED PHASE I WEIGHT
187	WT10_99	Num	8		ORIGINAL PHASE I WEIGHT
189	WT2C99	Num	8		CONDITIONAL PHASE II WEIGHT
190	WT2T99	Num	8		TOTAL PHASE II WEIGHT

7.1.6 Precision to which values are reported

Total abundance is reported as a whole number.

Mean abundance and standard deviation (SD) are reported to 2 decimal places.

7.1.7 Minimum Value in Data Set

Name	Min

ACC011	15
ALD02	2.5
ALDI98	0
ALEX11	-2.939E-39
ALKA11	-48.6
ALO_02	-2.939E-39
ALTL11	-2.939E-39
ANCAT98	0.7748
ANDEF98	-99.6546
ANSUM98	81.03
BNSTR99	96
C0051D	-2.939E-39
C0151D	-2.939E-39
C0251D	-2.939E-39
C0351D	-2.939E-39
C0451D	-2.939E-39
C0551D	-2.939E-39
C0651D	-2.939E-39
C0751D	-2.939E-39
C0851D	7
C0951D	7
C1051D	6
C1251D	7
C1451D	7
C1651D	7
C1851D	7
C2051D	6
C2251D	8
C2451D	8
C2651D	8
C2851D	38

7.1.7 Minimum Value in Data Set, continued

Name	Min
-----	-----
C3051D	.
C3251D	.
C3451D	.
C3651D	.
C3851D	.
CA11	0.457
CA98	22.804
CATSU98	72.23
CHLOD1D	36
CHLOR1D	20
CL11	0.161
CL98	4.542
CLSTR99	1
C0398	0
COLOR02	-2.939E-39
COND11	11.2
CONMH1D	-2.939E-39
CONMM1D	-2.939E-39
CONTH1D	-2.939E-39
CON_B1D	-2.939E-39
DAT\$MP	9681
DIC02	0.0295
DICE11	0.043
DICI11	0.093
DISM99	1
DOC11	0.3
DOMH1D	0.02
DOMM1D	0.03
DOTH1D	0.02
DO_051D	6.06
DO_151D	0.18
DO_B1D	0.03
DPMH1D	1.8
DPMM1D	1
DPSCB1D	1.7
DPSCM1D	1.8
DPSIT1D	1.1
DPSITX1D	1.2
DPTH1D	1.2
DP_B1D	0.6
DRPCDE	0
ELEV99	2.4
ELEVX99	227
FE11	-2.939E-39
FTL11	0.0103
FTL98	0.542
H98	0.025
HC0398	0.209
HDEP99	0.027
K11	0.054
K98	1.381
LATDD99	41.0042
LKSIZ99	4
LKSIZX99	4
LKVOL99	0.043
LKVOLX99	0.0388239
LNGDD99	-67.2667
MG11	0.143
MG98	11.763
MN11	-2.939E-39

7.1.7 Minimum Value in Data Set, continued

Name	Min
NA11	0.09
NA98	3.915
NH411	-2.939E-39
NH498	-2.939E-39
N0311	0.0019
N0398	0.031
N03DP99	0.71
ORGI098	2.1578
PH0051D	4.23
PH0151D	4.19
PH02	4.45
PHAC11	4.43
PHAL11	4.42
PHEQ11	4.39
PHMH1D	4.22
PHMM1D	4.28
PHTH1D	4.24
PH_B1D	4.14
PRCIP99	0.697
PTL11	0.4
RT99	0.001
RTX99	0.3
RUNIN99	10
RUNOF99	0.254
RUNOFX99	0.508
SECDI1D	0.6
SECME98	0.55
SECRE1D	0.5
SI0211	0.031
S0411	0.939
S0498	19.55
S04DP99	1.18
S0BC98	54.7997
T0051D	16.9
T0151D	14.2
T0251D	13.4
T0351D	11.6
T0451D	8.1
T0551D	6.7
T0651D	5.6
T0751D	5.1
T0851D	4.8
T0951D	4.7
T1051D	5.1
T1251D	4.7
T1451D	4.1
T1651D	3.9
T1851D	3.9
T2051D	3.9
T2251D	5.2
T2451D	5.1
T2651D	5
T2851D	5.4
T3051D	.
T3251D	.
T3451D	.
T3651D	.
T3851D	.
TIMSM1D	26100
TPPA1D	13

7.1.7 Minimum Value in Data Set, continued

Name	Min
-----	-----
TMPMH1D	3.8
TMPMM1D	6.3
TMPTH1D	5.7
TMP_B1D	3.9
TUR02	0.1
WALA99	2.18
WALAX99	2.2
WSHED99	13
WSHEDX99	26
WT1M99	1.477
WT10_99	1.449
WT2C99	1
WT2T99	12.054

7.1.7 Maximum Value in Data Set

Name	Max
-----	-----
ACC011	350.9
ALD02	471.9
ALDI98	456.3
ALEX11	444.1
ALKA11	454.8
ALO_02	55.8
ALT11	403.7
ANCAT98	1.9736
ANDEF98	188.3276
ANSUM98	1090.49
BNSTR99	1682
C0051D	123
C0151D	123
C0251D	145
C0351D	130
C0451D	121
C0551D	123
C0651D	124
C0751D	125
C0851D	124
C0951D	123
C1051D	123
C1251D	58
C1451D	54
C1651D	49
C1851D	52
C2051D	75
C2251D	36
C2451D	36
C2651D	37
C2851D	38
C3051D	.
C3251D	.
C3451D	.
C3651D	.
C3851D	.
CA11	8.993
CA98	448.726
CATSU98	1146.34
CHLOD1D	250
CHLOR1D	250
CL11	22.85

7.1.7 Maximum Value in Data Set, continued

Name	Max
-----	-----
CL98	644.599
CLSTR99	3
C0398	1.417
COLOR02	250
COND11	127.4
CONMH1D	123
CONMM1D	123
CONTH1D	125
CON_B1D	123
DATSMP	9719
DIC02	9.222
DICE11	4.588
DICI11	8.592
DISM99	94
DOC11	14.96
DOMH1D	12.12
DOMM1D	11.98
DOTH1D	12.22
DO_051D	10.28
DO_151D	10.82
DO_B1D	10.18
DPMH1D	20.4
DPMM1D	12
DPSCB1D	10.7
DPSCM1D	20.4
DPSIT1D	30.5
DPSITX1D	37.5
DPTH1D	16
DP_B1D	29
DRPCDE	3
ELEV99	791
ELEVX99	792
FE11	1570
FTL11	0.3776
FTL98	19.877
H98	37.154
HC0398	428.149
HDEP99	0.065
K11	2.095
K98	53.569
LATDD99	46.9339
LKSIZ99	1619.2
LKSIZX99	1626.9
LKVOL99	84.214
LKVOLX99	110.696
LNGDD99	-76.3208
MG11	3.091
MG98	254.266
MN11	1275
NA11	13.5
NA98	587.25
NH411	0.985
NH498	54.608
N0311	2.0523
N0398	33.104
N03DP99	1.83
ORGIO98	139.0179
PH0051D	9.45
PH0151D	9.52
PH02	9.08

7.1.7 Maximum Value in Data Set, continued

Name	Max
PHAC11	7.61
PHAL11	7.54
PHEQ11	8.28
PHMH1D	7.81
PHMM1D	8.92
PHTH1D	8.01
PH_B1D	7.74
PRCIP99	1.344
PTL11	137
RT99	10.042
RTX99	1319.1
RUNIN99	30
RUNOF99	0.762
RUNOFX99	0.889
SECDI1D	11
SECME98	12.6
SECRE1D	10.5
SI0211	7.244
S0411	15.93
S0498	331.663
S04DP99	3
S0BC98	1146.0329
T0051D	27.3
T0151D	26.4
T0251D	26.3
T0351D	26.2
T0451D	24.5
T0551D	23.5
T0651D	23
T0751D	22.4
T0851D	20.4
T0951D	20
T1051D	17.1
T1251D	14
T1451D	12.1
T1651D	11.4
T1851D	10.7
T2051D	9.3
T2251D	6.7
T2451D	6.2
T2651D	6.2
T2851D	5.4
T3051D	.
T3251D	.
T3451D	.
T3651D	.
T3851D	.
TIMSM1D	64920
TMPA1D	35
TMPMH1D	24.2
TMPMM1D	25.9
TMPTH1D	25
TMP_B1D	26.1
TUR02	15
WALA99	2932.39
WALAX99	2192.5769231
WSHED99	81424
WSHEDX99	81424
WT1M99	27.209
WT10_99	27.209

7.1.7 Maximum Value in Data Set, continued

Name	Max
WT2C99	15.5245
WT2T99	50.082

7.2 Data Record Example

7.2.1 Column Names for Example Records

ACCES1D ACC011 ALD02 ALDI98 ALEX11 ALKA11 ALO_02 ALTL11 ANCAT98 ANDEF98 ANSUM98
BNSTR99 C0051D C0151D C0251D C0351D C0451D C0551D C0651D C0751D C0851D C0951D
C1051D C1251D C1451D C1651D C1851D C2051D C2251D C2451D C2651D C2851D C3051D
C3251D C3451D C3651D C3851D CA11 CA98 CATSU98 CHLOD1D CHLOR1D CL11 CL98 CLSTR99
CNTY99 C0398 COLOR02 COMNT1DA COMNT1DB COND11 CONMH1D CONMM1D CONTH1D CON_B1D
CRWID1D DATSMP DIC02 DICE11 DICI11 DISM99 DOC11 DOMH1D DOMM1D DOTH1D DO_051D
DO_151D DO_B1D DPMH1D DPMM1D DPSCB1D DPSCM1D DPSIT1D DPSITX1D DPTH1D DP_B1D DRPCDE
ELEV99 ELEVX99 FE11 FTL11 FTL98 H98 HC0398 HDEP99 HYDID1D HYTYP99 INOUT99 K11 K98
LABNA02 LAKE_ID LAT99 LATDD99 LKID99 LKNAM99 LKSIZ99 LKSIZX99 LKVOL99 LKVOLX99
LNGDD99 LONG99 MAPBG99 MAPSM99 MG11 MG98 MN11 NA11 NA98 NH411 NH498 N0311 N0398
N03DP99 ORGIO98 PHO051D PHO151D PHO2 PHAC11 PHAL11 PHEQ11 PHMH1D PHMM1D PHTH1D
PH_B1D PRCIP99 PREC1D PREC01D PTL11 RGSPC99 RPREC1D RT99 RTX99 RUNIN99 RUNOF99
RUNOFX99 SBRGN99 SECD1D SECDV1D SECME98 SECRE1D SIO211 SITETYP S0411 S0498
S04DP99 S0BC98 SPLCD02 ST99 STRAT99 T0051D T0151D T0251D T0351D T0451D T0551D
T0651D T0751D T0851D T0951D T1051D T1251D T1451D T1651D T1851D T2051D T2251D
T2451D T2651D T2851D T3051D T3251D T3451D T3651D T3851D TIMSM1D TMPA1D TMPMH1D
TMPMM1D TMPTH1D TMP_B1D TUR02 WALA99 WALAX99 WDIR1D WSDIS99 WSHED99 WSHEDX99
WSOTH99 WSPD1D WT1M99 WT10_99 WT2C99 WT2T99

7.2.2 Example Data Records

"H",94.4,319.9000,319.9000,298.8000,-12.3,-0.0000,369.6000,.,.,.,711,17,16,17,
17,16,16,12,12,12,11,.,.,.,.,.,.,.,.,.,.,1.113,55.5390,113.5400,.,
250.0,.,.,1,"36043",0.0000,10,"(X) FIELD QC PERFORMED IN ROOM"," ",25.3,12,15,
12,11,"23,24",29JUL86,0.335,0.117,0.438,.,2.95,8.22,9.90,11.35,8.21,8.22,4.00,
8.6,5.3,.,8.6,11.0,11.6,7.7,9.5,0.645,3.645,0.20,0.000,0.0437,2.3000,17.7830,
0.8610,0.043,"MMM","DRAINAGE","NI/O",0.220,5.6250,"PBS&J","1A1-003","43-57'25'N",
43.9569,"04-504","HAWK POND",12.80,13.5,0.434,0.61728,74.9583,"74-57'30'W",
"UTICA","15' BIG MOOSE",0.197,16.2050,36.000,0.415,18.0530,0.006,0.3330,1.1487,
18.5290,1.25,21.0297,4.46,4.47,4.71,4.75,4.68,4.72,4.52,4.49,4.57,4.55,0.909,
"NONE"," ",4.2000,"REG/", " ",0.683,1.200,30,0.762,0.762,"A",5.6,"N",5.5,5.4,
0.842,"E",5.732,119.3400,2.10,95.4218,"G,P,W,3Z","NY","1A1",23.4,23.4,23.2,
22.4,20.9,18.5,15.3,9.6,9.5,8.1,.,.,.,.,.,.,.,.,.,8:39,20,9.0,
18.2,10.7,8.0,0.30,7.50,7.362962963,"N"," ",96.000,99.4," ", "LIGHT",9.633,
9.633,1.2754,12.285

"H",159.3,385.4000,382.4000,444.1000,-18.5,3.0000,403.7000,.,.,.,711,17,16,17,
17,16,16,12,12,12,11,.,.,.,.,.,.,.,.,.,.,1.205,60.1300,123.4400,.,
250.0,.,.,1,"36043",0.0000,10,"(X) FIELD QC PERFORMED IN ROOM"," ",20.3,12,15,
12,11,"23,24",29JUL86,1.375,0.341,0.606,.,3.12,8.22,9.90,11.35,8.21,8.22,4.00,
8.6,5.3,.,8.6,11.0,11.6,7.7,9.5,2.645,3.645,0.34,0.000,0.0458,2.4110,17.7830,
1.1910,0.043,"MMM","DRAINAGE","NI/O",0.323,8.2590,"PBS&J","1A1-003","43-57'25'N",
43.9569,"04-504","HAWK POND",12.80,13.5,0.434,0.61728,74.9583,"74-57'30'W",
"UTICA","15' BIG MOOSE",0.222,18.2620,41.000,0.437,19.0100,-0.000,-0.0000,
1.6553,26.7000,1.25,22.2416,4.46,4.47,4.72,4.75,4.81,4.86,4.52,4.49,4.57,4.55,
0.909,"NONE"," ",4.7000,"REG/", " ",0.683,1.200,30,0.762,0.762,"A",5.6,"N",5.5,
5.4,2.266,"H",5.364,111.6780,2.10,105.6598,"A,P,W","NY","1A1",23.4,23.4,23.2,
22.4,20.9,18.5,15.3,9.6,9.5,8.1,.,.,.,.,.,.,.,.,.,8:39,20,9.0,18.2,
10.7,8.0,0.80,7.50,7.362962963,"N"," ",96.000,99.4," ", "LIGHT",9.633,9.633,
1.2754,12.285

7.2.2 Example Data Records, continued

"H",38.5,19.4000,15.4000,-0.0000,74.6,4.0000,67.8000,.....,711,14,14,.....,
.....,2.619,130.6880,215.5800,68.0,70.0,.....,2,
"36041",0.0410,50,"(X) TRIPLICATE CUBITAINER ALSO TAKEN; NO UPWARD PROFILE
PERFORMED DUE TO SHALLOW LAKE DEPTH.; (X) FIELD QC PERFORMED IN ROOM AT MOTEL;
RECEIVED FORMS 29JUL86 DJC"," ",24.4,.....,"22,23",27JUL86,1.070,1.538,1.764,
.,4.49,.....,7.48,7.37,.....,2.0,3,.....,0.640,1.640,0.88,0.000,0.0618,3.2530,
0.2540,92.2820,0.043,"MMM","DRAINAGE","I/O",0.157,4.0140,"PBS&J","1A1-008",
"43-42'30'N",43.7083,"05-667","CEDAR RIVER FLOW",264.60,266.4,1.842,3.02632,
74.4750,"74-28'30'W","UTICA","15' INDIAN LAKE",0.604,49.6440,3.000,0.702,
30.5370,0.008,0.4440,0.0747,1.2050,1.23,43.1647,6.31,6.28,6.36,6.60,6.57,
7.16,.....,0.909,"NONE"," ",18.9000,"REG/"," ",0.025,33.400,25.0,635,0.889,
"A",1.9,"N",1.8,1.7,1.805,"E",4.854,101.0600,2.08,214.8835,"G P W,3Z","NY",
"1A1",22.6,22.7,.....,7:22,14,.....,
2.20,45.03,42.649399399," ","DR",11914.00,11361.8,"DAM AT NORTH END OF LAKE",
"NO WIND",9.633,9.633,2.2883,22.043

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude

-73.3208 decimal degrees

8.2 Maximum Longitude

-67.2667 decimal degrees

8.3 Minimum Latitude

41.0042 decimal degrees

8.4 Maximum Latitude

46.9339 decimal degrees

8.5 Name of Area or Region

Connecticut, Maine, New York, Pennsylvania, Rhode Island, Massachusetts,
and New Hampshire

9. QUALITY CONTROL / QUALITY ASSURANCE

9.1 Data Quality Objectives

9.2 Quality Assurance Procedures

9.3 Unassessed Errors

NA

10. DATA ACCESS

10.1 Data Access Procedures

10.2 Data Access Restrictions

10.3 Data Access Contact Persons

10.4 Data Set Format

10.5 Information Concerning Anonymous FTP

10.6 Information Concerning Gopher and WWW

10.7 EMAP CD-ROM Containing the Data

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12. TABLE OF ACRONYMS

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